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10/762,673	01/22/2004	Michael Holz	510.1093	5146

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NEW YORK, NY 10018

EXAMINER
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ABDI, AMARA

ART UNIT	PAPER NUMBER
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2609

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/762,673

Applicant(s)

HOLZ ET AL.

Examiner

Amara Abdi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :01/22/2004  
04/29/2004  
08/09/2004.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 2-7 are objected to because of the following informalities:  
(1) Claim 2, line 4, "a function" should be changed to "the function";
2. In claim 2, line 1, the Examiner suggests changing the dependency of claim 2, from claim 2 to claim 1, since the claim cannot depend on itself.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by Gloger et al. (US-PGPUB 2002/0172400).

Gloger et al. disclose a method for enhancing vision in a vehicle (paragraph [0008], line 1-3), (the examiner interpreted the improving of the reconcilability as the enhancing of vehicle's vision), comprising:

detecting input color values using an image-recording device (paragraph [0012], line 1-4), (the examiner interpreted the recording device as camera)

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assigning display color values to the input color values using an image-processing device (paragraph [0014], line 1-6), (the examiner interpreted the assigning of display color values is done by the color generator), where assigning of the display color values to input color values is performed as a function of an environmental parameter (paragraph [0020], line 1-6).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1,9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groves et al. (US 5,414,439) in view of Wen-chiang Huang; chwan-Hwa Wu "industrial Electronics, IEEE Transactions on" (volume 45, Issue 2, April 1998 Page (s): 351-357).

**(1) Regarding claim 1:**

Groves et al. disclose a vision- enhancing device for a motor vehicle (column 1, line 38-40), comprising:

An image-recording device configured to record a plurality of input color values (column 2, line 48; and line 59-61);

An image-display device (column 2, line 49-51; and column 3, line 47-51); and

An image-processing device configured to determine a plurality of display color values for display by the image display device (column 3, line 66-68; and column 4, line 1-10), (the examiner interpreted the color values as a full contrast mode).

However, Groves et al. does not disclose that each displayed color value is determined as a function of an environmental condition as recited in claim 1.

"Wen-chiang Huang; chwan-Hwa" teaches an adaptive color image processing and recognition for varying backgrounds and illumination condition, where the color values are determined as a function of an environmental condition (page 355, column 9, line 42-47; and page 356, column 12, line 16)

One skilled in the art would have clearly recognized the determining of displayed color values as a function of an environmental condition (page 355, column 9, line 42-47; and page 356, column 12, line 15-27). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Wen-chiang Huang; chwan-Hwa Wu, where the displayed color values are determined as a function of environmental condition, in the system of Groves et al., because such feature is invariant to different lighting situations and background colors. The adaptive fuzzy system process recognizes color under large distortion and shows its effectiveness in a real-world application (page 351, column 2, line 31-37).

**(2) Regarding claim 9:**

Groves et al. further disclose the device, where the image-recording device is an infrared camera (column 1, line 43) of a night-vision system (column 1, line 39).

**(3) Regarding claim 12:**

Groves et al. further disclose a vehicle having the vision-enhancing device (column 1, line 39-40; and line 43-44).

7. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groves et al. and Wen-chiang Huang; chwan-Hwa Wu "industrial Electronics, IEEE Transactions on" (volume 45, Issue 2, April 1998 Page (s): 351-357), and further in view Kuwata et al. (US-PGPUB 2002/0044122).

**(1) Regarding claim 2:**

Groves et al. and Wen-chiang Huang; chwan-Hwa Wu disclose all the subject matter as described in claim 1 above.

However, Groves et al. and Wen-chiang Huang; chwan-Hwa Wu do not disclose the memory unit for storing a plurality of color tables as recited in claim 2.

Kuwata et al. teaches the processing of an image data supplied to an image display apparatus, where the system comprises a memory (paragraph [0033], line 6-8) for storing a plurality of color tables (paragraph [0096], line 4-7)

One skilled in the art would have clearly recognized the memory (paragraph [0140], line 18) for storing the plurality of color tables (paragraph [0096], line 5-8; and paragraph [0097]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Kuwata et al., where the memory stores a plurality of color tables, in the system of Groves et al., because such feature carries out image processing of image data, which are to be supplied to an image display apparatus having less number of expressible tones than the number of

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tones included in original image data, thus improving picture quality of resulting displayed images (paragraph [0014], line 2-6).

**(2) Regarding claim 3:**

Groves et al. further disclose the image processing device includes a logic unit configured to determine display color value corresponding to input color values that are not stored in the plurality of color tables (column 3, line 68; and column 4, line 1-6), (the examiner interpreted that the control unit has the same function as the logic unit, and since there is no color table in the Groves et al. patent, the examiner interpreted that the control unit determines display color value that are not stored the plurality of color tables).

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Groves and Wen-chiang Huang; chwan-Hwa Wu "industrial Electronics, IEEE Transactions on" (volume 45, Issue 2, April 1998 Page (s): 351-357), as applied to claim 1 above, and further in view of Matsuda et al. (US-PGPUB 2003/0147053).

Groves et al. disclose all the subject matter as described in claim 1 above.

However, Groves et al. does not disclose the device, where the display color values are color grayscale values as recited in claim 1.

Matsuda et al. teaches an image display system, that performs a grayscale correction in accordance with on-site environment, where the display color values are color grayscale values (paragraph [0099], line 3-7)



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One skilled in the art would have clearly recognized the device, where the displaying the calibration images in an R-color, G-color, B-color, and white each having a predetermined grayscale value (paragraph [0099], line1-7). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Matsuda et al., where the display values are grayscale values, in the system of Groves et al., because such feature performs a grayscale correction more rapidly during calibration as well as it can perform grayscale correction that is appropriate for the on-site environment (paragraph [0011], line 4-5; and paragraph [0012], line 3-4)

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Groves and Wen-chiang Huang; chwan-Hwa Wu "industrial Electronics, IEEE Transactions on" (volume 45, Issue 2, April 1998 Page (s): 351-357), as applied to claim 1 above, and further in view of Lathrop (US 4,857,901).

Groves et al. disclose the entire entire subject as described in claim 1 above.

However, Groves et al. does not disclose the device, where the display color values are color values of a false color display as recited in claim 11.

Lathrop teaches a display controller utilizing attribute bits, where the display color values are color values of a false color display (column 5, line 29-32)

One skilled in the art would have clearly recognized the device, where the display color values are color values of a false color display (column 5, line 29-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Lathrop, where the display color values are color values of false

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color display, in the system of Groves et al., because such feature provides a computer graphics display controller system which allows for flexible configuration of an image memory, as well as allows faster dynamic displays by reducing the time required for changing a new buffer (column 2, line 10-12; and line 23-24).

10. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groves et al., Wen-chiang Huang; chwan-Hwa Wu "Industrial Electronics, IEEE Transactions on" (volume 45, Issue 2, April 1998 Page (s): 351-357), and Kuwata et al., as applied to claim 2 above, and further in view of Gloger et al. (US-PGPUB 2002/0172400).

**(1) Regarding claim 4:**

Groves et al., Wen-chiang Huang; chwan-Hwa Wu, and Kuwata et al. disclose all the subject matter as described in claim 2 above.

However, Groves et al., Wen-chiang Huang; chwan-Hwa Wu, and Kuwata et al. do not disclose the device, where at least one of the pluralities of color tables is selectable taking into consideration a current user of the device as recited in claim 4.

Gloger et al. teaches a process and device for improving the visibility in vehicles, where at least one of the pluralities of color tables is selectable (paragraph [0014], line 1-4) taking into consideration a current user of the device (paragraph [0018], line 9-13), (the examiner interpreted the current user of the device as a vehicle operator, who is using the vehicle navigating system to select a functions)

One skilled in the art would have clearly recognized the device, where at least one of the pluralities of color tables is selectable (paragraph [0014], line 1-6) taking into consideration a current user of the device (paragraph [0018], line 9-13). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Gloger et al., where the device comprises a sensor and control device, in the system of Groves et al., because such feature improves the reconcilability by the operator of images of traffic scenes recorded outside of the vehicle spectrum, as well as supporting the vehicle operator in situations in which little or not daylight is available, such as for example night, in tunnel or in fog or other bad weather, in that they provide to the vehicle operator useful information in familiar shapes or presentation (paragraph [0008], line 2-3; and paragraph [0010], line 2-6).

**(2) Regarding claim 5:**

Groves et al., Wen-chiang Huang; chwan-Hwa Wu, and Kuwata et al. disclose all the subject matter as described in claim 2 above.

However, Groves et al., Wen-chiang Huang; chwan-Hwa Wu, and Kuwata et al. do not disclose the device, comprising a sensor and vehicle component, and a control device for selecting the one of plurality of color tables using at least one of a value output of the sensor as recited in claim 5.

Gloger et al. teaches a process and device for improving the visibility in vehicles, where the device comprises a sensors, for recognition, classification and color matching (paragraph [0018], line 1-3), and a vehicle component (paragraph [0012], line 2), and a control device for selecting the one of plurality of color tables using at least one of a

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value output of the sensor (paragraph [0017], line 4-10), (the examiner interpreted the control device as a color matching device, and color table as a color generator).

One skilled in the art would have clearly recognized the device, comprising a sensor (paragraph [0018], line 1-3 and vehicle component (paragraph [0012], line 2), and a control device for selecting the one of plurality of color tables using at least one of a value output of the sensor (paragraph [0017], line 4-7). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Gloger et al., where the device comprises a sensor and control device, in the system of Groves et al., because such feature improves the reconcilability by the operator of images of traffic scenes recorded outside of the vehicle spectrum, as well as supporting the vehicle operator in situations in which little or not daylight is available, such as for example night, in tunnel or in fog or other bad weather, in that they provide to the vehicle operator useful information in familiar shapes or presentation (paragraph [0008], line 2-3; and paragraph [0010], line 2-6).

**(3) Regarding claim 6:**

Groves et al., Wen-chiang Huang; chwan-Hwa Wu, and Kuwata et al. disclose all the subject matter as described in claim 5 above.

However, Groves et al., Wen-chiang Huang; chwan-Hwa Wu, and Kuwata et al. do not disclose that the control device is configured to select at least one of the plurality of color tables using a property of an image data recorded by the image recording device as recited in claim 6.

Gloger et al. teaches a process and device for improving the visibility in vehicles, where the control device is configured to select at least one of the plurality of color tables using a property of an image data recorded by the image recording device (paragraph [0012], line 3; and paragraph [0017], line 10-12), (the examiner interpreted the control device as a color matching device, and color table as color generator, and the property of an image data as for example that meadows in the summer are green, or the street surfacing materials are gray...etc, also the image recording device as camera).

One skilled in the art would have clearly recognized the device, where the control device is configured to select at least one of the plurality of color tables using a property of an image data recorded by the image recording device (paragraph [0017], line 10-17). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Gloger et al., where the device is configured to select at least one of the plurality of color tables, in the system of Groves et al., because such feature improves the reconcilability by the operator of images of traffic scenes recorded outside of the vehicle spectrum, as well as supporting the vehicle operator in situations in which little or not daylight is available, such as for example night, in tunnel or in fog or other bad weather, in that they provide to the vehicle operator useful information in familiar shapes or presentation (paragraph [0008], line 2-3; and paragraph [0010], line 2-6).

**(4) Regarding claim 7:**

Groves et al., Wen-chiang Huang; chwan-Hwa Wu, and Kuwata et al. disclose all the subject matter as described in claim 2 above.

However, Groves et al., Wen-chiang Huang; chwan-Hwa Wu, and Kuwata et al. do not disclose an operating unit configured to select at least one of the plurality of color tables from an operating action of a user as recited in claim 2.

Gloger et al. teaches a process and device for improving the visibility in vehicles, where an operating unit is configured to select at least one of the pluralities of color tables from an operating action of a user (paragraph [0014], line 4-6; and paragraph [0022], line 1-2), (the examiner interpreted the operating unit as the display optic, where the operator selects the functions, and a color table as a color generator, and a user as a vehicle operator).

One skilled in the art would have clearly recognized the device, where an operating unit is configured to select at least one of the pluralities of color tables from an operating action of a user (paragraph [0014], line 4-6; and paragraph [0022], line 1-4). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Gloger et al., where the operating unit is configured to select one of the pluralities of color tables, in the system of Groves et al., because such feature supports the vehicle operator in situations in which little or not daylight is available, such as for example night, in tunnel or in fog or other bad weather, in that they provide to the vehicle operator useful information in familiar shapes or presentation (paragraph [0010], line 2-6).

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11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Groves et al. and Wen-chiang Huang; chwan-Hwa Wu "industrial Electronics, IEEE Transactions on" (volume 45, Issue 2, April 1998 Page (s): 351-357) as applied to claim 1 above, and further in view of Gloger et al. (US-PGPUB 2002/0172400).

Groves et al. and Wen-chiang Huang; chwan-Hwa Wu disclose the entire subject matter as described in claim 1 above.

However, Groves et al. and Wen-chiang Huang; chwan-Hwa Wu do not disclose that the image processing device includes a color table generator for generating the plurality of color tables using the input color values as recited in claim 8.

Gloger et al. teaches a process and device for improving the visibility in vehicles, where the image-processing device includes a color table generator for generating the plurality of color tables using the input color values (paragraph [0014], line 1-3).

One skilled in the art would have clearly recognized the device, where the image-processing device includes a color table generator for generating the plurality of color tables using the input color values (paragraph [0014], line 1-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Gloger et al., where the image-processing device includes a color table generator, in the system of Groves et al., because such feature improves the reconcilability by the operator of images of traffic scenes recorded outside of the vehicle spectrum (paragraph [0008], line 2-3).

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Secor (US 5,289,321) discloses a consolidated rear view camera and display system for motor vehicle.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amara Abdi whose telephone number is (571) 270-1670. The examiner can normally be reached on Monday through Friday 7:30 Am to 5:00 PM E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on (571) 272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a



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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amara Abdi  
05/11/2007.

A handwritten signature in black ink, appearing to read "Shuwang Liu".

SHUWANG LIU  
SUPERVISORY PATENT EXAMINER